REMARKS

After the foregoing amendment, claims 10-26, as amended, are pending in the application. Claims 1-9 stand canceled. Applicant submits that no new matter has been added to the application by the Amendment.

The Present Invention

The claimed invention is directed to a remote management system for configuring and monitoring devices such as printers connected to a distributed computer network.

As described at page 1 of the application, devices such as printers are typically characterized by various configuration variables written in the native language of the device. The configuration variables are retrieved or modified using a variety of system protocols and languages such as, for instance, SNMP, HTTP, and PJL. As further described at page 1, the presentation of information at an operator interface by such system protocols and languages is not easily understood by humans. Generally, where the user does not have detailed knowledge of the above languages, specialized computer programs with hard coded mapping are written to provide translation of the device information in the native language of the device into a selected human understandable language at the user interface.

A novel feature of the claimed computer system is that a user is able to communicate with each device connected to the system to obtain information about the device in a selected language even though the management system does not have specific knowledge about the protocols and/or languages used by the device.

Advantageously, the present invention relieves the user of having detailed knowledge about the language/protocol of the devices connected to the network and avoids the necessity of having to create specialized computer programs or scripts having hard coded mapping in order for the user to communicate with the network devices. The present invention achieves these advantages by utilizing generic applications that are modular and data driven in combination with a database, which may be either part of the system (a data dictionary) or may be external (a data central), to provide for translation of device information in the native language of the device into a human understandable language. The present invention also provides the means for dynamically and automatically updating itself with respect to the languages and protocols of a device of unknown type which is newly discovered by the network.

<h1 style="text-align:center">Rejection - 35 U.S.C. § 103</h1>

The Examiner rejected claims 10-26 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent Publication 2003-0120760 (Fortin et al.) in view of U.S. Patent No. 6,539,378 (Gupta et al.).

<h2 style="text-align:center">Claim 10</h2>

The Examiner states that Fortin et al. discloses "a method of using a computer system for automatically presenting values of variables obtained by a data engine from a selected type of device to a human interface in a human understandable language comprising the steps of: (1) requesting by the data engine from a data dictionary names of variables associated with a selected type of device, (2) obtaining by the data engine from the data agent the values obtained by the data agent, (3) obtaining by the data engine from the data agent the values obtained by the data agent and (4) obtaining from the data dictionary the translating information.

The Examiner also states that Fortin et al. does <u>not</u> explicitly detail translating by the data engine the obtained values into the human understandable language using the translating information obtained from the data dictionary and presenting, by the data engine to the user interface, the translated values in the human understandable language. However, the Examiner states, it was well known in the art at the time of the invention that translation software such as XML could translate the different vocabularies of data, variables into one that an agent or human [could] understand, as taught by Gupta. Therefore, the Examiner states, it would have been obvious to one of ordinary skill in the art to incorporate the software translation a native/origin information into the human understandable language as taught by Gupta into the Fortin et al. apparatus. Applicant respectfully traverses the rejection.

<p style="text-align:center">3</p>

Claim 10 recites:

> *A method using a computer system for automatically presenting values of variables obtained by a data engine from a selected type of device to a user interface in a human-understandable language, the system including a data dictionary containing information for translating the values of the variables in the native language of the device into the human-understandable language, and a data agent which is connected to the device, the method comprising the steps of:*
>
> > *requesting by the data engine from the data dictionary, names of all variables associated with the selected type of device;*
> >
> > *obtaining by the data agent from the selected type of device, values of the variables;*
> >
> > *obtaining, by the data engine, from the data agent, the values obtained by the data agent;*
> >
> > *obtaining from the data dictionary the translating information;*
> >
> > *translating, by the data engine, the obtained values of the variables into the human-understandable language using the translating information obtained from the data dictionary; and*
> >
> > *presenting, by the data engine, to the user interface, the translated values in the human-understandable language.*

Fortin et al. is directed to a method for detecting configuration changes to network elements (devices and device components) for the purpose of managing the network (paragraph 0002). The device configuration data identified by Fortin et al. includes the network address of the device, the community string which serves as a password for accessing the device and descriptive data about the device which is accessed by SNMP commands and which is stored in the in the management information base (MIB) of the device (paragraph 0042). The method, in relevant part, includes polling selected network addresses for configuration data on the network devices and components at the polled network addresses (paragraph 00038 and Fig. 3).

As well known, an MIB is a list, written in ASN.1 notation, of data objects which describes the network device. Each data object in the MIB is given an object identifier (OID), which is a series of integers separated by dots which identifies the path through the MIB to the

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specific configuration data (device parameter) for the object and which uniquely identifies the object in the SNMP universe. Neither the MIB or the OIDs are in human-understandable form as defined by the present application

At paragraph 0042, Fortin et al. discloses an MIB translation file (MTF) that is described as identifying the object identifiers (OIDs) for a device by values and indexes. The MTF data is collected when collecting statistics from a network device. Fortin et al. uses the MTF to determine when configuration data has changed after an event has occurred. (See paragraphs 0046-0050.)

In rejecting claim 10 over Fortin et al., the Examiner puts forth the following arguments:

a. The Examiner states that Fortin et al. discloses at paragraph 0078, "obtaining by a data agent based on the selected type of device, values of the variables." However, Applicant is unable to find any reference to a data agent in paragraph 0078. Further, Applicant is unable to find any reference to an "agent" anywhere in Fortin et al. Accordingly, there can be no disclosure by Fortin et al. of obtaining by a data agent based on the selected type of device, values of the variables, as recited in claim 10.

b. The Examiner states that Fortin et al. discloses at paragraph 0078, "obtaining by a data agent based on the selected type of device, values of the variables." However, Fortin et al. obtains the values of device variables based on the network address of the device (paragraphs 0038-0039). In sharp contrast, claim 10 recites that the values of variables are based on a selected type of device and not the network address of a device.

c. The Examiner also states that Fortin et al. obtains translating information from the data dictionary. The Examiner appears to be equating the MIB of a device to a data dictionary and then incorrectly ascribes to the MIB translation file (MTF), the ability to provide the MIB with the ability to translate information. However, an MIB is not a data dictionary (i.e. database) but merely a text file. Also, the name MTF is a misnomer. The MTF defined by Fortin et al. merely identifies the object identifiers (OID) of the device by values and indexes (see above) for the purpose of detecting a configuration change and does not provide translation of either the OID or MIB information. Accordingly, there is no disclosure, teaching or suggestion by Fortin et al. of obtaining translating information from the data dictionary as recited in claim 10.

Gupta et al. is directed to a method of information retrieval and interpretation from disparate semi-structured information resources. Gupta et al. operates by examining information from a plurality of sources and structures according to a pre-specified schema. Information meeting a specified level of similarity is then reduced to a single description.

The method of Gupta et al. uses a wrapper to extract attributes of interest from the semi-structured information such as from web data objects, and produces tuples, which are provided to a relational database system. Once the wrapper for specific semi-structured information is executed, a user may generate a relational database query (e.g., SQL query) which operates on the tuples produced by the wrapper. Accordingly, the relational database system views the semi-structured information as one or more database tables as a result of the wrapper's processing.

The Examiner states that it is well known that translation software such as XML as taught by Gupta et al. at Table 1 and col. 4 could translate different vocabularies of data, variables into one that an agent or human [would] understand. However, Gupta et al. does <u>not</u> teach or suggest at any place in the patent, the use of XML. <u>Further, XML is merely a data format and does not, by itself, provide translation of different vocabularies of data, variables into one that an agent or human [would] understand.</u> Also, Gupta et al. does <u>not</u> teach or suggest translating values of variables <u>by any means</u> into human understandable form, as recited in claim 10.

Applicant further submits that Fortin et al. and Gupta et are not properly combinable under 35 U.S.C. § 103. There is no teaching, suggestion or disclosure in Fortin et al. to use XML as a language even if such a language were disclosed by Gupta et al. or even if it did (which it does not) provide a translation capability.

Also, even if the teachings of Fortin et al and Gupta et al. were combined, the combination would not teach or suggest all the elements of claim 10. Neither Fortin et al. nor Gupta et al. teach or suggest the step of obtaining by a data agent connected to a device, values of variables for obtaining, from a data dictionary, translation information, for translating the values of the variables in the native language of a device into a human understandable form.

Applicants submit for all the above reasons that the combination of Fortin et al and Gupta et al. does not make claim 10 obvious. Accordingly Applicant respectfully requests reconsideration and withdrawal of the §103 rejection of claim 10. .

In respect to claim 11, there is no teaching or suggestion in Fortin et al. or Gupta et al. at col. 4, lines 20-50, of a step of automatically communicating with a _second_ data dictionary if the sought for information is not available in the first data dictionary. In respect to claim 12, there is no teaching or suggestion in either Fortin et al. and Gupta et al. (paragraphs 0042-0052) of automatically storing in the first data dictionary the names of the variables obtained from the _second_ data dictionary.

Further, it is respectfully submitted that since claim 10 has been shown to be allowable, claims 11-12 dependent on claim 10 are allowable, at least by their dependency. Accordingly, for all the above reasons, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejection of claims 11-12.

Claims 13 -21

The Examiner has rejected claim 13 based on the same rational as claim 10. Accordingly, Applicant traverses the Examiner's rejection on at least the same bases as claim 10.

Applicant further submits that the Examiner has _not_ considered those limitations in claim 13 which are _not_ the same as the limitations of claim 10 and which are _patentable_ over the applied references.

Specifically, the Examiner has not identified in either Fortin et al. or Gupta et al. a teaching, suggestion or disclosure of a plurality of data agents, each one of which being associated with a specific language or protocol, or the following steps of claim 13:

> _(a) selecting one of the plurality of data agents based on the_
> _network address;_
>
> _(b) communicating with a data dictionary to obtain names of_
> _variables associated with a union of the selected network address and the selected_
> _data agent; and_
>
> _(c) obtaining values of the variables from the device at the selected_
> _network address required for determining a type of the device using the language_
> _and protocol of the selected data agent, wherein if the required values are_

obtained, a type of the device is determined from the values of the variables, and
if the required values are not obtained, <u>automatically repeating steps (a), (b) and</u>
<u>(c)</u> until the required values are obtained.

Accordingly, for all the reasons cited in connection with claim 10 and those above, Applicant respectfully requests reconsideration and withdrawal of the §103 rejection of claim 10.

In respect to claim 14, Applicant submits that there is <u>no</u> teaching or suggestion in either Fortin. et al or Gupta et al. of <u>automatically</u> communicating with a second data dictionary <u>if</u> the sought for information is not available in the first data dictionary. In respect to claims 15 and 20, Fortin et al. merely discloses at paragraph 0079 that the network disclosed by Fortin et al. may be a WAN, a LAN an FDDI etc. and does <u>not</u> teach or suggest that communication between a data dictionary and a data central is by means of a hypertext markup language link. With respect to claim 18, nether Fortin et al. nor Gupta et al. at col. 4, lines 20-50 (as discussed above) teach or suggest translating the names of variables into human understandable form.

Further, it is respectfully submitted that since claim13 has been shown to be allowable, claims 14-21 dependent on claim 13 are allowable, at least by their dependency. Accordingly, for all the above reasons, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejection of claims 14-21.

Claims 22-26

The Examiner has rejected claim 22 based on the same rational as claim 10. Accordingly, Applicant traverses the Examiner's rejection on the same bases as claim 10.

Applicant further submits that the Examiner has <u>not</u> considered those limitations in claim 22 which are <u>not</u> the same as the limitations of claim 10 and which <u>are patentable</u> over the applied references.

Specifically, Applicant submits neither Fortin et al nor Gupta et al. teach, suggest or disclose a system which includes:

at *<u>least two data agents, adapted to utilize a different language or</u>*
<u>protocol of a device,</u> and

a data dictionary connected to the data engine, said data dictionary
containing information for <u>translating the values of device</u> variables in the native
language of the device into human understandable language and being adapted to

automatically provide names of the device variables corresponding to both the
network address and to the language and/or protocol of the device, wherein the
data engine uses the *names of the device variables* provided by said data
dictionary to *automatically obtain values of the device variables* from the device,
and wherein the data engine *automatically translates the values of the device*
variables into human understandable language using the information obtained
from the data dictionary for translating the values.

Accordingly, for all the reasons cited in connection with claim 10 and those above, Applicant respectfully requests reconsideration and withdrawal of the §103 rejection of claim 22.

In respect to claim 23, Applicant submits that there is <u>no</u> teaching or suggestion in Fortin et al. or Gupta et al. of <u>automatically</u> communicating with a second data dictionary <u>if</u> the sought for information is not available in the first data dictionary. In respect to claim 24, neither Fortin et al. nor Gupta et al. teach or suggest that <u>communication</u> between the data dictionary and the data central uses a hypertext markup language link. In respect to claim 25, neither Fortin et al. nor Gupta et al. teach or suggest <u>storing the names of variables associated with the type of device in the data dictionary</u>.

Further, it is respectfully submitted that since claim 22 has been shown to be allowable, claims 23-26 dependent on claim 22 are allowable, at least by their dependency. Accordingly, for all the above reasons, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejection of claims 23-26.

Conclusion

Insofar as the Examiner's objections and rejections have been fully addressed, the instant application, including claims 1-26, is in condition for allowance and Notice of Allowability of claims 10-26 is therefore earnestly solicited.

In view of MPEP paragraph 706.02, Applicant respectfully requests that the Examiner make the instant application "special", and if the application is not found to be allowable, to contact the attorney of record at the telephone number below, in order to facilitate termination of the prosecution.

Respectfully submitted,

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(Date)

By: _____
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